

Title (en)

Method and apparatus for bonding component leads to pads located on a non-rigid substrate.

Title (de)

Verfahren und Vorrichtung zum Verbinden von Bauteilleitungen an Anschlussflächen, die auf einem nichtstarren Substrat liegen.

Title (fr)

Méthode et appareil pour faire le bonding de conduits d'éléments à des pastilles posées sur un substrat élastique.

Publication

EP 0423433 A1 19910424 (EN)

Application

EP 90113636 A 19900717

Priority

US 41393089 A 19890928

Abstract (en)

Component leads (16) are bonded to pads (14) disposed on a non-rigid substrate (10) by the application of a combination of laser energy and ultrasonic energy. The pads preferably are bare-copper pads, without a noble metal coating or a chemical pretreatment, and the non-rigid substrate is preferably an epoxy printed circuit board.

IPC 1-7

B23K 20/02; **B23K 20/10**; **B23K 26/00**

IPC 8 full level

H01L 21/607 (2006.01); **B23K 1/005** (2006.01); **B23K 20/10** (2006.01); **B23K 20/12** (2006.01); **B23K 26/06** (2006.01); **H01L 21/60** (2006.01); **H05K 3/32** (2006.01)

CPC (source: EP)

B23K 1/0056 (2013.01); **B23K 20/10** (2013.01); **B23K 20/1205** (2013.01); **B23K 26/0093** (2013.01); **B23K 26/06** (2013.01); **H05K 3/328** (2013.01); **H01L 2224/85205** (2013.01); **H01L 2924/01029** (2013.01); **H01L 2924/01077** (2013.01); **H01L 2924/01079** (2013.01); **H01L 2924/01087** (2013.01); **H01L 2924/014** (2013.01); **H01L 2924/09701** (2013.01); **H05K 2201/10628** (2013.01); **H05K 2201/10681** (2013.01); **H05K 2203/0285** (2013.01); **H05K 2203/107** (2013.01)

Citation (search report)

- [Y] EP 0150305 A1 19850807 - IBM [US]
- [Y] US 4779340 A 19881025 - KIHM DOUGLAS P [US], et al
- [A] FR 2605176 A1 19880415 - PEUGEOT [FR], et al
- [AP] GB 2224164 A 19900425 - BICC PLC [GB]
- [A] US 4499524 A 19850212 - SHIOLENO LEWIS J [US]
- [AD] US 4330699 A 19820518 - FARROW MICHAEL M
- [Y] PATENT ABSTRACTS OF JAPAN vol. 5, no. 27 (E-46), 18 February 1981; & JP - A - 55153265 (MITSUBISHI ELECTRIC CORP.) 29.11.1980
- [Y] RESEARCH DISCLOSURE no. 296, December 1988, abstract no. 29620, New York, NY, US; "An Improved, Wire-Size independent, Ultrasonic Bonder Tip For Fine Wire Attachments"
- [A] H. BRUCH et al.: "LEITERPLATTEN, HERSTELLUNG UND VERARBEITUNG" pages 15-24, 1978, E.G. Leuze Verlag, Saulgau/Württ., DE
- [AD] IBM TECHNICAL DISCLOSURE BULLETIN vol. 29, no. 11, April 1987, pages 4870-4872, New York, US; "Intrinsic-Thermocouple Process Monitor"
- [AD] SEMICONDUCTOR INTERNATIONAL May 1988, pages 130,131, Chikago, ILL., US; P. CHALCO et al.: "Discrete Wire Bonding Using Laser Energy"
- [AD] RESEARCH DISCLOSURE no. 273, January 1987, abstract no. 27362, New York, NY, US; "Diffusion Bonding"

Cited by

EP0928659A1; US5938951A; EP0826503A3; US5653381A; CN114502315A; US6854632B1; WO9932254A1; WO9500283A1; WO2009156505A1; WO9500279A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0423433 A1 19910424; JP H03120737 A 19910522; JP H0712051 B2 19950208

DOCDB simple family (application)

EP 90113636 A 19900717; JP 22456390 A 19900828